or other information regarding the user's finger. The sensor information may be acquired at regular or intermittent intervals, or when a change occurs.

[0134] In step **S102**, the processing unit **124** (see FIG. **2**) acquires the sensor information via the data acquisition module **123** (see FIG. **2**), and determines the parameters of the electrical signal to be output to the electrode sheet **111** provided in the operable element **110**. The parameters are, for example, the voltage and frequency values for an alternating voltage signal. The processing unit **124** may be configured to reference a table stored in advance in internal memory, for example, when executing the processing to determine the above parameters.

[0135] Such a table may store data specifying voltage and frequency values in association with factors such as the position of the user's finger, or in association with images displayed on the operable element, such as switches, sliders, objects, and other categories of elements. The processing unit **124** uses the sensor input and the information stored in the table to determine the above parameters.

[0136] In step **S103**, the processing unit **124** outputs a command containing the determined parameters to the tactile control module **127** (see FIG. **2**). In step **S104**, the tactile control module **127** (see FIG. **2**) outputs an electrical signal to the electrode sheet **111** of the operable element **110** in accordance with the parameters contained in the command.

[0137] Subsequently, the processing in steps **S101** to **S104** is repeated. If a change occurs in the sensor information acquired in step **S101**, then the currently set parameters are modified in step **S102**, and the electrical signal to be output in step **S104** is correspondingly modified. As a result of such modification, the friction with respect to the user's finger is increased or decreased, thereby enabling the user to experience a variety of user interface feedback.

[0138] Depending on the acquired sensor information, the output electrical signal may also be terminated. In this case, a command specifying parameters wherein the voltage and frequency values are both equal to zero is output from the processing unit **124** to the tactile control module **127**.

[0139] Lastly, an exemplary hardware configuration of an apparatus that executes the foregoing processing will be described with reference to FIG. **12**. A user interface feedback apparatus in accordance with an embodiment of the present invention is realizable by means of a portable information processing apparatus, for example. More specifically, an embodiment of the present invention is realizable by means of an information processing apparatus having a display that functions as an input/output interface, as described earlier with reference to FIG. **3**.

[0140] FIG. **12** illustrates an exemplary hardware configuration of such an apparatus. However, the configuration shown in FIG. **12** is merely one example of a hardware configuration for realizing the processing configuration shown by the block diagram in FIG. **2**. The configuration shown in FIG. **12** will now be described.

[0141] The operable element **711** corresponds to the operable element **110** shown in FIG. **2**, and may configured as the display-type operable element shown in FIG. **3**, for example. The sensor **721** detects factors such as the position and pressure of the user's finger, with the detected information being acquired via a sensor information acquisition module. The various sensor information is input into the CPU (central processing unit) **701**. The CPU **701** then executes the processing of the processing unit of the foregoing embodiment shown in FIG. **2**. For example, the form of the electrical signal to be output to the electrode sheet of the operable element in accordance with the sensor information may be determined by means of processing executed according to a program recorded in the ROM **702**.

[0142] More specifically, parameters such as the voltage and frequency values for an alternating voltage signal are determined. Herein, a table used to determine such parameters may be stored in the memory **714** or the ROM **702**, with the CPU **701** determining the parameters by referencing the table. An electrical signal conforming to the determined parameters is then output to the electrode sheet of the operable element **711** via the electrical signal output module **713**.

[0143] The ROM (read-only memory) **702** stores information such as programs and computational parameters used by the CPU **701**. The RAM (random access memory) **703** stores information such as programs executed by the CPU **701**, as well as parameters that change during the execution of such programs. The ROM **702** and the RAM **703** are both connected by a host bus **704** realized by means of a CPU or similar bus. The host bus **704** is connected to a bus **706** via a bridge **705**.

[0144] In addition to the above, the hardware configuration also includes memory **714** made up of components such as a hard disk or flash memory, as well as a communication module **715**. It should be appreciated that the exemplary hardware configuration shown in FIG. **12** is merely one example of a user interface feedback apparatus in accordance with an embodiment of the present invention. A user interface feedback apparatus in accordance with an embodiment of the present invention is not limited to the configuration shown in FIG. **12**, and other functions may also be provided so long as the processing described in the foregoing embodiment can be executed.

[0145] The foregoing thus describes the present invention in detail and with reference to particular embodiments thereof. However, it should be appreciated as obvious to those skilled in the art that modifications and substitutions of the foregoing exemplary embodiments may be made without departing from the spirit and scope of the present invention. In other words, the foregoing discloses the present invention by means of examples, and is not to be interpreted as being limiting. The scope of the present invention is to be determined in conjunction with the attached claims.

[0146] In addition, it is possible to execute the series of processes described in the present specification by means of hardware, software, or a compound configuration of both hardware and software. In the case of execution by means of software, a program stating a processing sequence may be installed and executed in the memory of a computer built into special-purpose hardware. Alternatively, the program may be installed and executed on a general-purpose computer capable of executing various processing. For example, the program may be recorded onto a recording medium in advance and then installed onto a computer. In addition, the program may be received via a network such as a LAN (Local Area Network) or the Internet, and then installed to a recording medium such as an internal hard disk.

[0147] It should also be appreciated that the various processes described in the present specification are not limited to being executed in a time series following that described herein, but may also be executed in parallel or individually, depending on the processing capability of the apparatus executing the process or other factors. In addition, in the